

Exhibit to Agenda Item #2

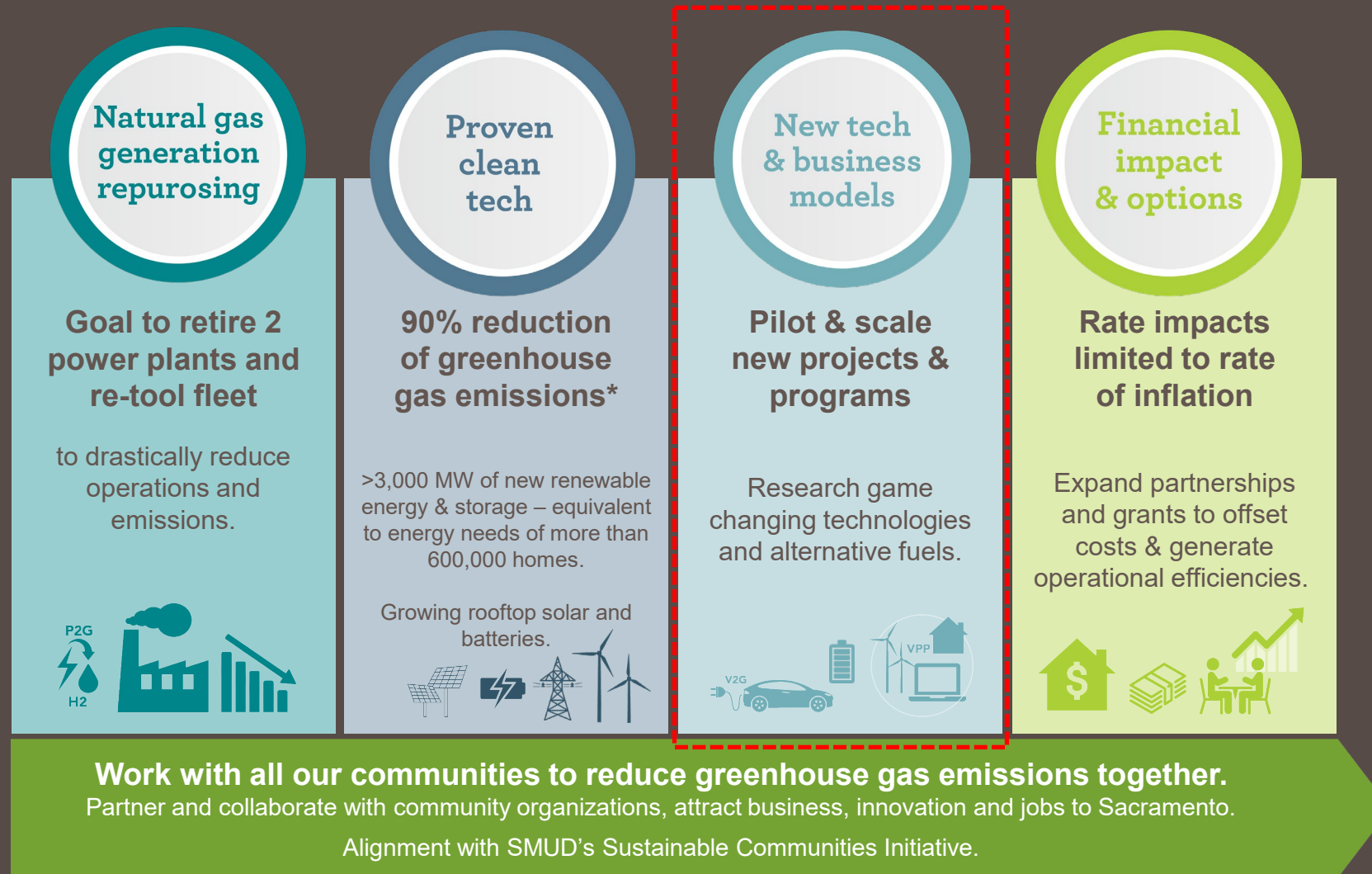
Discuss the monitoring report for **Strategic Direction SD-10, Innovation.**

Board Policy Committee and Special SMUD Board of Directors Meeting
Wednesday, October 9, 2024, scheduled to begin at 6:00 p.m.
SMUD Headquarters Building, Auditorium

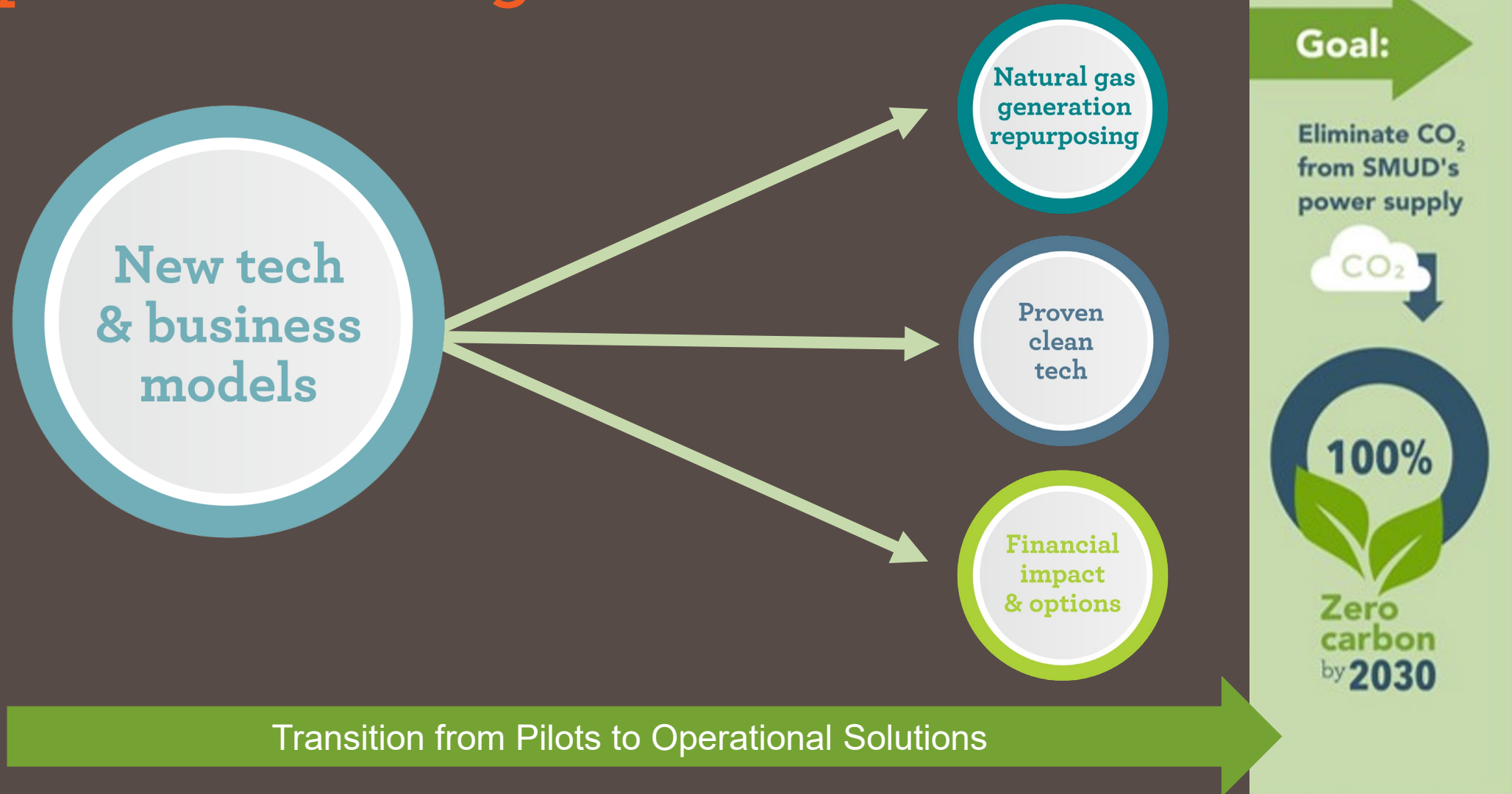
SD 10 Innovation

Delivering innovative solutions, products and services to our customers is a core value. To assure our long-term competitiveness, SMUD shall invest in research and development projects that support its core and key values, and integrate emerging technologies and new business models into SMUD's customer offerings in a way that balances risk and opportunity and benefit our customers and community.

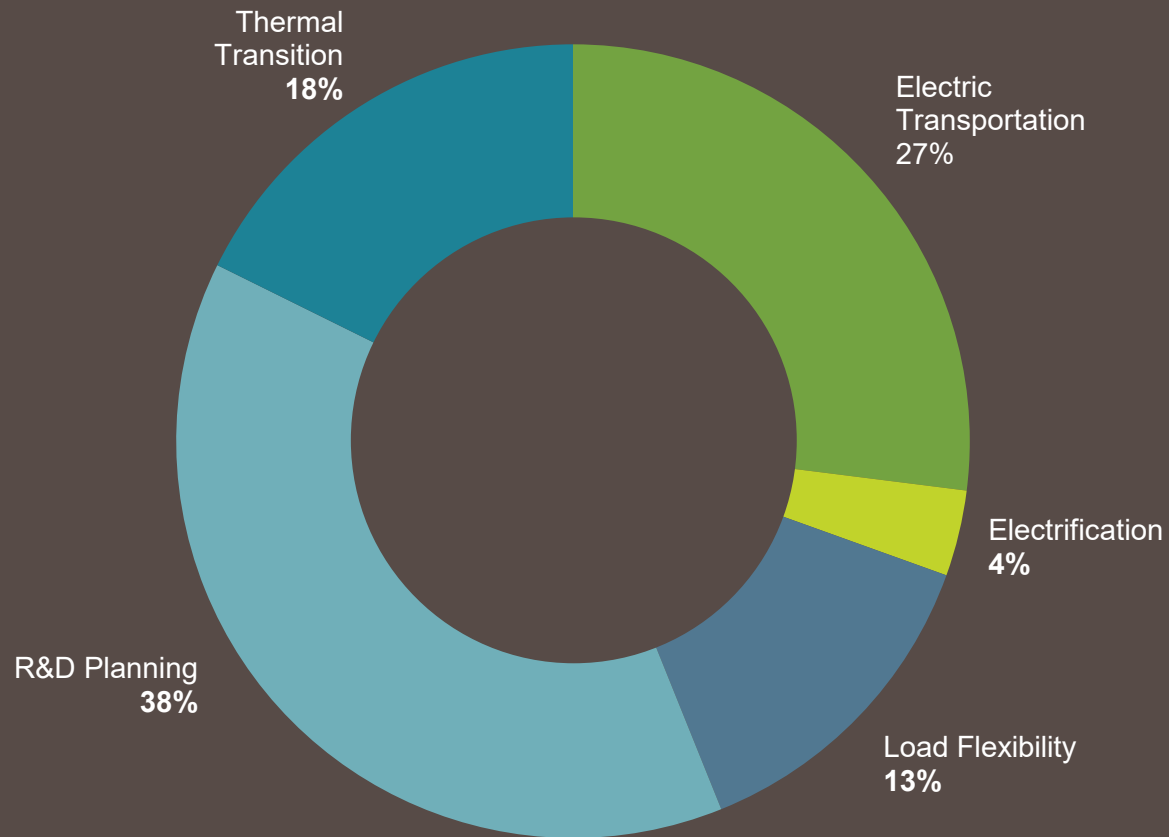
Aligning to the Zero Carbon Plan



Operationalizing Innovation



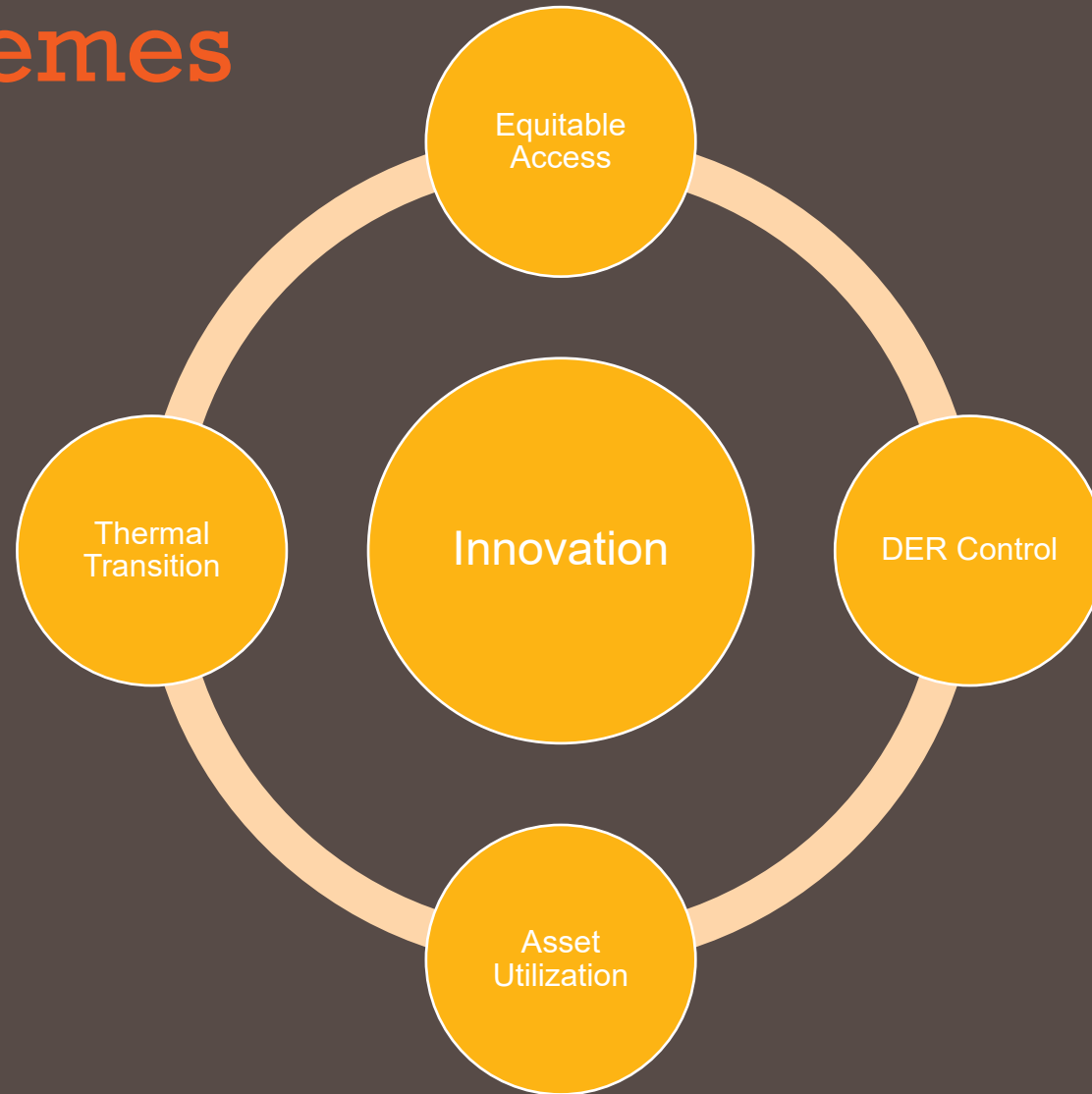
R&D Portfolio Budget (Aug '23 – Jul '24)



Total: \$6.3M

Significant projects supported by R&D are budgeted in other business unit (i.e. ESS flow battery)

Portfolio Themes



Equitable Access to Electrification



- Del Paso mobility hub began operations Oct 2023
- St. Francis Manor Central HPWH study - Saving 54% CO2 and 20% energy costs
- ChargeReady Community – construction ramp up




Looking ahead

- CEC FAST grant – ramping up
- REACH 2 grant delivery
- Smart Panel solution evaluation

DER Communication and Control

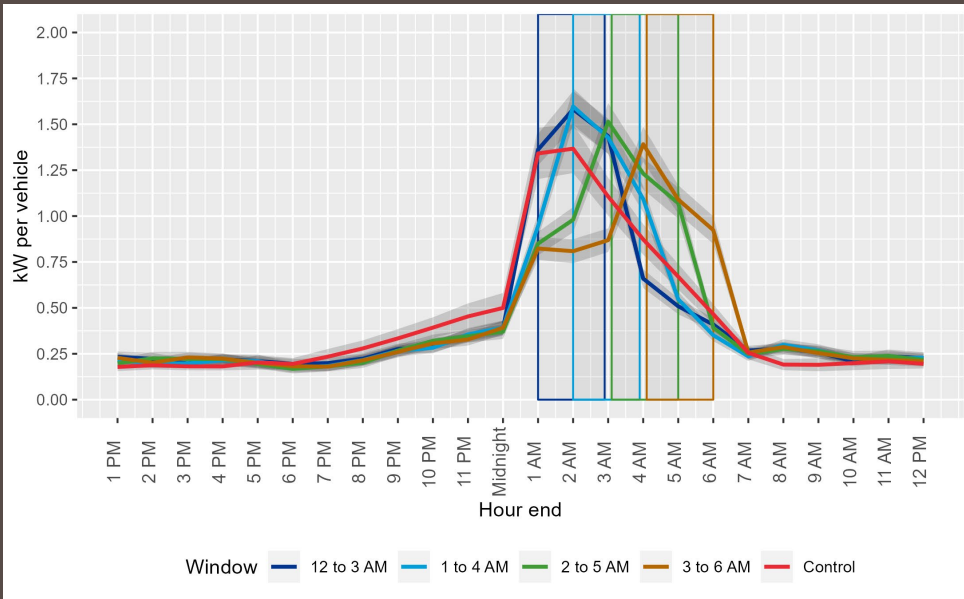


- DERMS phase 3 
- Smart Inverters communication testing
- Twin Rivers Managed charging

Looking ahead

- V2G expansion
- Multifamily Virtual Power Plant demo

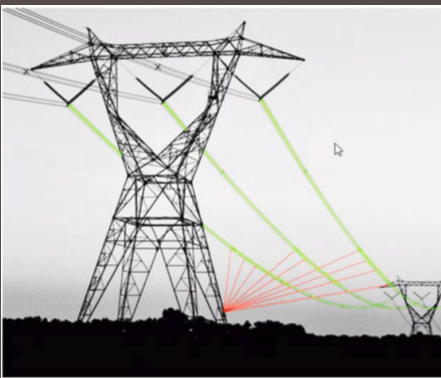
Optimize Asset Utilization



- Home Infrastructure Planning phase 2 – expanding to full single family population in Q4.
- Residential EV managed charging (Load shift to mitigate impacts on the distribution system – field transformers)
- Transmission Line monitoring to evaluate dynamic line ratings

Looking ahead

- Transition EV managed charging from pilot to program
- Large data and AI utilization



Thermal Transition



- Hedge 4MW Li-ion battery
- ESS Energy Warehouse iron flow battery
- Hydrogen production and blending research
- Carbon Farming and Ecosystem Service Research at RSSII (Advancing from sustainability to restoration)

Looking ahead

- ARCHES Hydrogen Hub
- Advanced energy storage technology

Conclusion

Request the Board accept the
SD-10 Monitoring Report.